Work Orde Monday, July 14					*122	2331*					-	Page 1	
Item ID: Revision ID: Item Name:	D3463-1 Arm				Accept	*N900	<u>040</u>	100)* s	etup Sta	17	S1* S2*	
Start Date: Required Date: Reference:	7/14/14 : 7/14/14	Start Qty: 4.00 Req'd Qty: 4.00		*4* *4*		Cust Item 1 Customer:	ID:						
Approvals:	Process Plan	n: <u>ML</u> 5		14-07-15			ate:	- 	R	Run Sta Sto	/\ 	R1* R2*	
Sequence ID/ Work Center I		Operation Description			Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Rev	ision Nbr				***************************************							
D3463	Rev	В											
100 *100* Bandsaw		BAND SAW Memo			0.00				4			J.CL.	1/17
Jeaspa Bandsaw		Cut blank 2	25.00 " lon _i	g								· ~ 1	. ,
105					0.00								
105		•			0.00				4			J.CL.	_/
Lathe Conv Conventional Lathe	e	Memo Ream tube	at both end	ls aprox 2" deep								ans 191	(4)
■													
110		0 1151			0.00				11			14-0	P-1
110 Small Fab		Small Fab			0.00				_7			1	W v

1-Bend as per dwg D34632-Trim to lenght per dwg D34633- Deburr

Memo

Small Fab

DQA:			Date:	,									"DART
QA Closed:			Date:			WORK ORDER NON	-CC	ONFO	RMANCE / UPDATE	W	ork Order up	ndate only	AEROSPACE
QA Closeu.			Date.										
Work Orde	er:					DISPOSITION			AGAINST	DE	PARTMENT	/PROCESS	
	-				_	Rework			Skid-tube Crosstube			Water Jet	Engineering
Part N	١٥٠ _					Scrap		i .	Machining Small Fab	-	4	d. Eng. Coor.	Quality
						Use-as-is		Therr	moforming Finishing	袣	Rec/Sto	re/Packaging	Other
NCR I	۱o. <u>.</u>	****				Suspected Unapproved			Large Fab Composite	<u> </u>] .	Supplier	
Root					Desc	ription of work order update	ı	nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling	Ш												
Handling/Pre	Щ											·	
Material	Щ						İ						
Operator	Ш											·	
Offset/Setup	Ш								·				
Process	Щ												**
Supplier	\vdash												
Training	Н												
Transport	Н												
Unapproved			1		.		FΔI	III T CA	TEGORY		<u> </u>		
Landi	nø G	Gear				General		<u> </u>	120011				
Lands	$\overline{}$	Bending				Bend] Folio/I	Program		Outside Dim	ensions	Pressure/Forced
	-	Centre N	ot Concer	ntric		BOM/Route		Grain		Γ	Over/Under	tolerance	Set-up
	-	Cracks				Broken/Damage/Defect		Hardwa	are	_	Part Incorre	ci 🗍	Temperature/Cure
	-	Crimp/Kii	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Unqualified		Part Lost/M	issing	Weld
		Cuffs		,		Contamination		4	tions Incomplete/Unclear	Γ	Part Moved		Wrong Stock Pulled
	\vdash	Crushing				Countersink	Г	4	gned/off center		Positioned V	Vrong	
	-	Heat Trea				Cut Too Short		Mislab	=		Power Loss/	Surge	Other
	П	Inspectio		Tube		Drawing		Misrea	d				
		Marks/Cl			·	Drill Holes		Off-set					
		Turning S	Sequence			Finish		Out of	Calibration				
		Wave/Tw				Fit/Function		Out of	Sequence				

Work Ord	er ID	122331
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122331

Page 2

Monday, July 14, 2014 1:56:17 PM Accept D3463-1 Item ID: *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Arm *4* Start Qty: 4.00 **Start Date:** 7/14/14 **Cust Item ID:** Required Date: 7/14/14 Reg'd Oty: 4.00 *4* **Customer:** Reference: Run **Tooling:** Process Plan: Date: Date: **Approvals:** Stop OC: SPC (Y/N): Date: Date: Reject Sequence ID/ Set Up/ Tool ID Tool # Plan Accept Reject Insp. Operation **Description** Code Qty Qty Number Stamp **Work Center ID Run Hours** 120 QC5- Inspect part completeness to step on W/O 0.00 *120* 0.00 Memo Ensure 90 deg angle is within tol. (+/-0.5deg) critical dim. Quality Control 0.00 130 CONVENTIONAL MILLING MACHINE *120* 0.00 Mill Conv Memo Conventional Milling Machine 1- Drill as per dwg D3463(One side only) 2-Deburr as per dwg D3463 QC2- Inspect parts off machine FAI/FAIB 0.00 140 *140* QC 0.00 Memo Quality Control

DQA:			Date:			WORK ORDER NON	cc	NEO	DAAANCE / HDDATE				
QA Closed:			Date:			WORK ORDER NON-			RIVIANCE / OPDATE	W	ork Order up	date only	AEROSPACE
Manle Orde						DISPOSITION			AGAINS	T DE	PARTMENT	/PROCESS	
Work Orde	-					Rework Scrap			Skid-tube Crosstub Machining Small Fa		Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	-					Use-as-is Suspected Unapproved		Thern	noforming Finishin Large Fab Composit	~}—	Rec/Sto	re/Packaging Supplier	Other
Root					Desc	ription of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling			·			-							
Handling/Pre Material					l I								·
Operator	一												
Offset/Setup			ŀ										
Process													
Supplier												·	
Training													
Transport													
Unapproved			<u> </u>		<u> </u>		<u> </u>				<u> </u>	<u> </u>	
							FA	ULT CA	regory				
Landi	$\overline{}$					General]	N	Γ	Outside Dim	onsions [Pressure/Forced
	\vdash	Bending			-	Bend	H	1	Program	\vdash	Over/Under		Set-up
		Centre No	ot Concer	ntric	-	BOM/Route	-	Grain Hardwa		-	Part Incorre	_	Temperature/Cure
	Н	Cracks	-l./D:l-	//4/	\vdash	Broken/Damage/Defect	-	4	ion Incomplete/Unqualified	\vdash	Part Lost/M	⊢	Weld
		Crimp/Kir Cuffs	тк/кірріе	y wave	` <u></u>	Burrs Contamination	-	4 .	tions Incomplete/Unclear	\vdash	Part Moved		Wrong Stock Pulled
		Crushing			⊨	Countersink	-	4	gned/off center	-	Positioned V	ــــ Vrong	
	_	Heat Trea	at		\vdash	Cut Too Short	-	Mislab			Power Loss/	_	Other
	\vdash	Inspectio		Tube	-	Drawing	\vdash	Misrea		_	_ ···,	<u> </u>	1
	\vdash	Marks/Ch		·ubc		Drill Holes		Off-set					1.11
		Turning S				Finish		4	Calibration				
	\vdash	Wave/Tw				Fit/Function		-	Sequence				

Work Ord Monday, July 14					*122	2331*						Page 3
Item ID: Revision ID: Item Name:	D3463-1 Arm				Accept	*N <u>9</u> 00	040	100)* s	etup Sta	17	S1* S2*
Start Date: Required Date: Reference:	7/14/14 : 7/14/14	Start Qty: 4.00 Req'd Qty: 4.00		*4* *4*		Cust Item I Customer:	ID:				·	
Approvals:	Process	Plan:	Date:		Tooling:	Da	ate:		R	tun Sta	<i>^</i> I <i>V</i> I	R1*
1	QC:		Date:		SPC (Y/N):	D:	ate:			Sto	, _b *N	R2*
Sequence ID/ Work Center I	D	Operation Description			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		QC8- Inspect parts - seco	ond check		0.00	٠			3 /	♂		0AS 44 \
150 QC Quality Control		Мето			0.00				<u> </u>	Ø		9-89
160 *1 An* Packaging Packaging		Identify as per dwg & St Memo	ock Locatic	on: <u> </u>	0.00				<u>4</u> x		DAS 28 9-89 AUG	1 2 2014

170

QC21- Final Inspection - Work Order Release

0.00

170

Memo

0.00

Quality Control

MLJ 14-8-13 M4-8-12

DQA:			Date:										"DART
QA Closed:			Date:			WORK ORDER NON	-C(ONFO	RMANCE / UI		Vork Order up	odate only	AEROSPĀCĒ
						DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Work Orde	er: _		*							_			
						Rework			Skid-tube	Crosstube	_	Water Jet	Engineering
Part N	۱٥					Scrap			Machining	Small Fab		d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	۱o. <u>-</u>					Suspected Unapproved			Large Fab	Composite		Supplier	
Root					Desc	ription of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Design													
Doc/Data	Ш												
Equip/Tooling													
Handling/Pre`	Ш												
Material													
Operator													
Offset/Setup													
Process	Ш											·	
Supplier				· .		•							
Training	$\vdash \vdash$												
Transport , \$	H	811,			,				10 A				
Unapproved	L_		<u> </u>	İ			FΔI	III T CA	TEGORY		<u> </u>		<u> </u>
Landi	na G				<u> </u>	General		OLI OA					
Earlai	<u> </u>	Bending				Bend	Г] Folio/F	Program	Г	Outside Dim	ensions	Pressure/Forced
	H	Centre N	ot Concer	ntric		BOM/Route	H	Grain		.	Over/Under	tolerance	Set-up
	H	Cracks				Broken/Damage/Defect		Hardwa	are		Part Incorre	ci .	Temperature/Cure
		Crimp/Kii	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Ur	nqualified	Part Lost/M	issing	Weld
		Cuffs	, , , ,	•		Contamination		Instruc	tions Incomplete/L	Jnclear	Part Moved		Wrong Stock Pulled
	П	Crushing				Countersink	Г	Misali	gned/off center		Positioned \	Vrong	
1	-	Heat Trea				Cut Too Short		Mislab	eled		Power Loss/	Surge	Other
		Inspectio	n Strip in	Tube		Drawing		Misrea	d	_			
		Marks/Cl	natter			Drill Holes		Off-set					
		Turning S	Sequence			Finish		Out of	Calibration				
		Wave/Tw	vist in Tub	oe .		Fit/Function		Out of	Sequence				

Picklist Print

Monday, July 14, 2014 1:56:17 PM

Work Order ID: 122331

122331

Parent Item:

D3463-1

D3463-1

Parent Item Name: Arm

Start Date: 7/14/14

Required Date: 7/14/14

Page 1

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP REV. A 05.11.17 NEW ISSUE EC

IPP REV:B

ADDED MANUAL LATHE STEP 10-06-02 JLM VER:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M316TR1.00W.120		Purchased	No		100	f	76.0737	2.083	8.770526	<u> </u>		
MO1CTD	1 0014/ 4	20						**				

M316181 00W 120

316 RD tubing 1.00 x .120w

Loc Qty Location Loc Code MAT018 76.073684 M126182 76.073684

3.4' J.C.-L.

DQA:			Date:			WORK ORDER NON	~		DAAANCE / LIDDATE				"DART
QA Closed:			Date:			WORK ORDER NON		JINFOI	RIVIANCE / OPDATE	W	ork Order up	odate only	AEROSPACE
W 10.4		•				DISPOSITION			AGAINST	. DE	PARTMENT	/PROCESS	
Work Orde	er: -				_	· Rework			Skid-tube Crosstube		1	Water Jet	Engineering
Part N	۱o	 				_ Scrap		ı	Machining Small Fab		4	d. Eng. Coor.	Quality
NCR N	۰. No.	· · · · · ·				Use-as-is . Suspected Unapproved			noforming Finishing Large Fab Composite	1	Rec/Stol	re/Packaging Supplier	Other
Root	T				Desci	ription of work order update	ı	nitial	Action		Sign &	-	
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design									•				
Doc/Data													
Equip/Tooling	· .					,							
Handling/Pre									·				
Material									`				
Operator	Ш											,	
Offset/Setup													
Process	Ш					•							
Supplier										į		-	
Training					1								
Transport													
Unapproved			1		<u> </u>							<u> </u>	<u> </u>
							FAI	ULT CAT	regory				
Landi	ng G	iear				General		3			٦.		7
		Bending			_	Bend		1	Program	\vdash	Outside Dim		Pressure/Forced
	Ш	Centre No	ot Concer	ntric		BOM/Route	<u></u>	Grain		\vdash	Over/Under	, —	Set-up
		Cracks				Broken/Damage/Defect		Hardwa		\vdash	Part Incorre	<u> </u>	Temperature/Cure
	Ш	Crimp/Ki	nk/Ripple	:/Wave		Burrs		- ·	ion Incomplete/Unqualified	<u> </u>	Part Lost/M	issing	Weld
	Ш	Cuffs				Contamination		-	tions Incomplete/Unclear	\vdash	Part Moved		Wrong Stock Pulled
	Ш	Crushing			、 <u> </u>	Countersink	L	-1	gned/off center	\vdash	Positioned V	_	٦
	Ш	Heat Trea	at			Cut Too Short		Mislabe			Power Loss/	Surge	Other
	\vdash	Inspectio		Tube		Drawing		Misread					
		Marks/Ch	natter			Drill Holes	<u></u>	Off-set			<u> </u>		
		Turning S	equence			Finish		-	Calibration				
	$ \ $	Wave/Tw	ist in Tul	эе		Fit/Function		Out of	Sequence				

D3065-5DART AEROSPACE LTD	Work Order:	122331
Description: Arm	Part Number:	D3463-1
Inspection Dwg: D3463 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

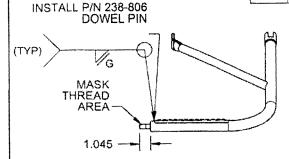
		X First Arti	cle _	Prot	otype	
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.125	+0.004/-0.001	6.126	V		Calipor	JCV-08
0.485	+0.015/-0.000	0,494	V		11	
0.610	+0.015/-0.000	0.615	V		И	
16.00	+/-0.030	16.00	100			
11.00	+/-0.030	11.00	100			
						·

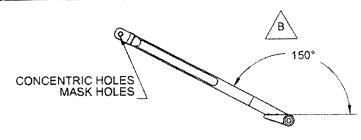
		~ 0.44		
Measured by: J.C. Li	Audited by:	DW Prototy	pe Approval:	N/A
Date: 14/10 /17	Date:	14/8/11/14/8/12	Date:	N/A

Rev	Date	Change	Revised by	Approved
Ver	06.09.19	New Issue	KJ/JLM	
			KJ/JLM	E
B	07.09.06	Dimensions added	1 70	

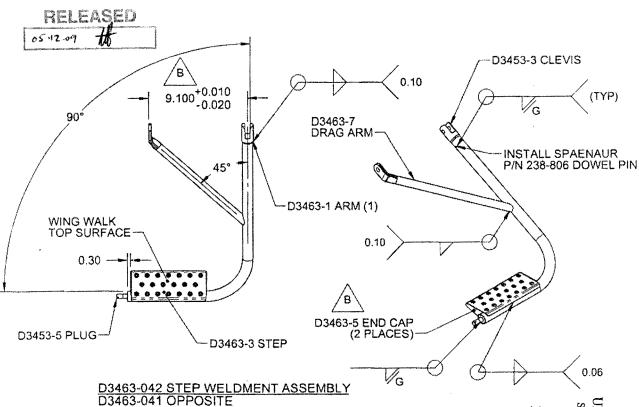


	DESIGN RF		ORAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	CHECK	ED ,,,	APPROVED //	DRAWING NO.	REV. B
		M	#	D3463	SHEET 1 OF 4
	DATE			TITLE	SCALE
	05.12.05			STEP WELDMENT	1:8
	А	05.09.20		NEW ISSUE	
	В	05.12.05		REVISE DIM.: D3463-5 WAS D3463-5F	





ENGINEERING UNCONTROLLED CO. SUBJECT TO AMENDMEN



NOTES:

- 1) WELD PER DART QSI 004
 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
 BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) ALL DIMENSIONS ARE IN INCHES
 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010
 6) IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER

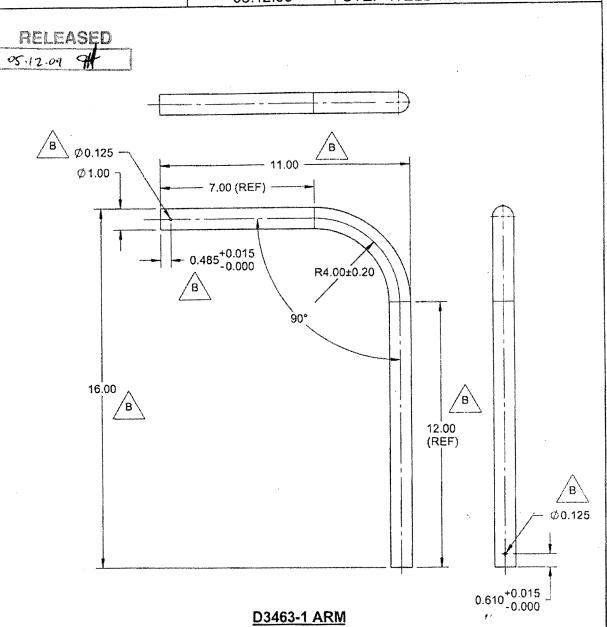
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DESIGN RF	DRAWN BY	DART AEROSPA HAWKESBURY, ONTAF	
CHECKED	APPROVED #	DRAWING NO. D3463	REV. B SHEET 2 OF 4
DATE 05.1	12.05	STEP WELDMENT	SCALE 1:4



NOTES:

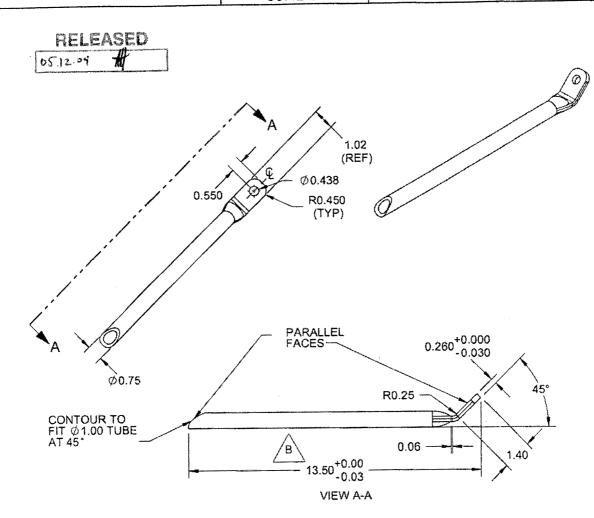
- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC. M304TR1.000W.120) 2) FINISH: NONE 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED 4) ALL DIMENSIONS ARE IN INCHES 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.025

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DESIGN DRAWN BY		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED #	DRAWING NO. D3463	REV. B SHEET 3 OF 4
DATE 05.1	12.05	STEP WELDMENT	SCALE 1:4



D3463-7 DRAG ARM

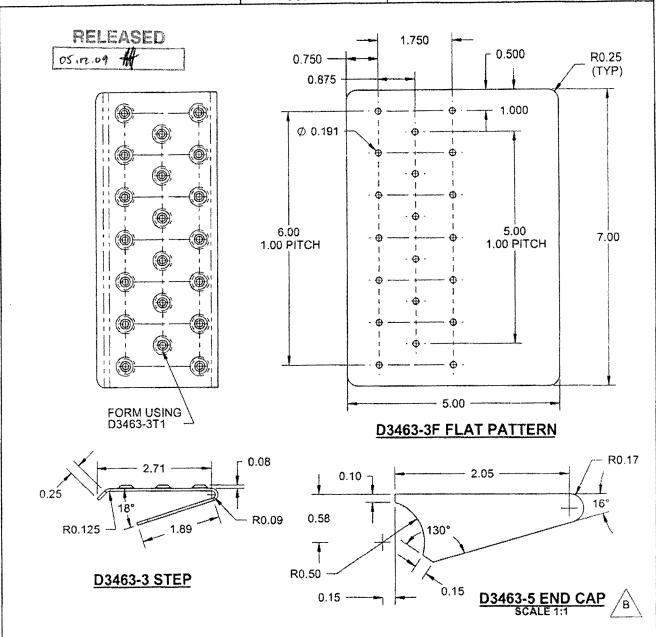
NOTES:

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC. M304TR0.750W.120) 2) FINISH: NONE 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED 4) ALL DIMENSIONS ARE IN INCHES 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

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DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3463	REV. B . SHEET 4 OF 4
DATE 05.1	12.05	TITLE STEP WELDMENT	SCALE 1:2



NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET, 0.060 THICK (REF. DART SPEC. M304S16GA)
 2) FINISH: NONE
 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) ALL DIMENSIONS ARE IN INCHES
 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

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